

**WHAT IS CLAIMED IS:**

**1. A USB hub, comprising:**

an upstream interface port to be operated under the USB transmission control protocol for serving as a data-switching communication port of relevant devices;

a hub device comprised of a hub control unit, a packet-switching unit, a router, and a repeater; in which the repeater is employed to receive signals and retransmit the same to a designated device; the hub control unit is a logic control unit for detecting the connection state of devices to be connected with the upstream and a downstream interface port, and ascertain the data transmission speed thereof for controlling the repeater to transmit data to the router or the packet-switching unit; the packet-switching unit is a device for switching a high-speed data stream to a full/low speed data stream; the router is employed to distribute and transmit a data stream to each device connected with the downstream interface port, or distribute and transmit an upstream data stream from the downstream interface port to the repeater or the packet-switching unit; and

a downstream interface port to be operated also under USB transmission control protocol, being provided with a plurality of interface ports to serve as a data-switching communication port of relevant devices.

**2. The USB hub according to Claim 1, wherein the hub device is provided with an external power supply unit; each interface port of the downstream interface port possesses an on/off switch of power supply; and the hub control unit is assigned to manage the device connected with each interface port of the downstream interface port, detect the electrical load thereof, and control the on/off switch of**

power supply to either connect with an internal power source or connect with the external power supply unit.

**3. A USB hub with built-in storage device, comprising:**

an upstream interface port to be operated under the USB transmission control protocol for serving as a data-switching communication port of relevant devices;

a hub device comprised of a hub control unit, a packet-switching unit, a router, a built-in storage device, and a repeater, in which the repeater is employed to receive signals and retransmit the same to a designated device; the hub control unit is a logic control unit for detecting the connection state of devices to be connected with the upstream and a downstream interface port, and ascertain the data transmission speed thereof for controlling the repeater to transmit data to the router or the packet-switching unit; the packet-switching unit is a device for switching a high-speed data stream to a full/low speed data stream; the router is employed to distribute and transmit a data stream to each device connected with the downstream interface port, or distribute and transmit an upstream data stream from the downstream interface port to the repeater or the packet-switching unit; the built-in storage device is employed to memorize downstream data transmitted to the downstream interface port; and

a downstream interface port to be operated also under USB transmission control protocol, being provided with a plurality of interface ports to serve as a data-switching communication port of relevant devices.

**4. The USB hub with built-in storage device according to Claim 3, wherein the hub device is provided with an external power supply unit; each interface port of the**

downstream interface port possesses an on/off switch of power supply; and the hub control unit is assigned to manage the device connected with each interface port of the downstream interface port, detect the electrical load thereof, and control the on/off switch of power supply to either connect with an internal power source or connect with the external power supply unit.